4307 reports[74] show that price cap LECs have increased digital control program switches from 64 percent at the end of 1990 to more than 81 percent at the end of 1993; the percent of access lines equipped with access to inter-LATA SS7 functionality has increased from .03 percent to more than 74 percent in that same time period; and that price cap LECs have increased the percent of access lines equipped with access to intra-LATA SS7 functionality from less than 18 percent at the end of 1990 to more than 78 percent at the end of 1993.[75]

56. BellSouth states that since price caps was implemented, Bell operating companies have invested 52 percent of their cash flow from local telephone operations in network facilities versus 48 percent during the 1988-1990 time frame.[76]

57. As to introduction of new services, SWB claims that the "restrictive regulatory environment" inhibits introduction of new services. Nonetheless, it states that it has offered about 50 new services since the inception of price cap regulation. Of these services, ten are related to Open Network Architecture (ONA), 32 non-ONA new services are effective and the rest have been denied or were pending as of the time of the comments.[77]

58. USTA's response to our data request shows that price cap LECs have made at least 478 new service filings since the advent of price caps. In addition, they have made at least 158 restructured services filings.

3. Analysis

59. We have reviewed the data submitted by the parties and described above. In general, we find that the submissions of USTA and Sprint are reasonably accurate,[78] and that they provide substantial evidence that rates have declined significantly under price cap regulation compared to the rates in effect at the start of price cap regulation.

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[74] ARMIS is a database containing detailed investment and expense information reported by LECs on a regular basis.

[75] See Appendix C, Tables 1 through 3.

[76] BellSouth February 10, 1995, ex parte filing.

[77] SWB Comments at 16.

[78] Because Sprint relies on the October 18, 1994 data submission of USTA, its figures do not reflect USTA's December 1994 update and the February and March 1995 updates. The difference in Sprint's total and USTA's total appears to result from the difference in the data used.

60. The full benefits to consumers consist, however, of more than just the amount by which rates in 1994 were lower than rates in effect immediately prior to the initiation of price caps. The full benefits are cumulative, i.e., the sum of the annual amounts by which rates in each year of the price cap review period (1991 - 1994) were below the rates in effect immediately prior to the initiation of price caps. Compared to rates in effect immediately prior to initial price cap rates, USTA's data submission shows the cumulative savings have been approximately $5.9 billion. Of this amount, cumulative savings due to exogenous cost adjustments were $4.03 billion; cumulative savings due to below-cap filings were $1.14 billion; and the cumulative net amount of sharing and the lower formula adjustment mechanism was $0.152 billion. The cumulative changes due to the net effect of inflation, productivity factors actually selected, and the effect of traffic growth on the calculation of the carrier common line per minute rates accounts for approximately $593 million.[79]

61. We also conclude that the IXCs have passed on the savings they have received from lower interstate exchange access charges to end-users. The AT&T price cap plan requires AT&T to treat changes in the access charge rates it pays to LECs as exogenous and pass through any savings from reductions in those charges to residential service basket customers.[80] This may be accomplished through the use of optional calling plans, promotions and discounts from the basic rates. Our recent performance review of the AT&T price cap plan indicated that AT&T has passed on these cost reductions to its customers.[81] Although basic rates have remained relatively high, AT&T has passed on its savings from lower access charges in the form of optional calling plans and other discounts and promotions.[82] We also have no reason to believe that AT&T's long distance competitors have not been forced by competition to follow suit. Thus, although the data BellSouth offered to show that basic long distance rates have not decreased may be correct, that data fails to capture the effect of optional calling plans and other discounts.

[79] In those years in which GNP-PI exceeded the productivity factor the net effect was an increase in prices; in those years in which GNP-PI was lower than the productivity factor, the net effect was a decrease in prices.

[80] 47 C.F.R. § 61.44(b).

[81] Price Cap Performance Review For AT&T, CC Docket No. 92-134, 8 FCC Rcd 6968, 6970-71 (1993).

[82] Id., at 6970-72, 6975 (1993).

62. We have reviewed the Service Quality Report,[83] Fiber Deployment Update,[84] and the Subscribership Report,[85] released by our Industry Analysis Division since we adopted the Notice in January 1994. In general, those reports show no significant changes in the trends discussed in the Notice and summarized above. Specifically, measures of service quality and customer complaints have in most cases not changed dramatically as of the third quarter of 1993,[86] although in at least one case the data show a fairly large increase in customer complaints. Specifically, the reported percentage of residential customers in NYNEX's region satisfied with their telephone service declined from 92.1 percent in the second half of 1992 to 85.1 percent in the first half of 1993.[87] LEC fiber deployment grew by about 27 percent in 1993, compared with 31 percent in 1992.[88] Between the time of the Notice and July 1994, telephone subscribership declined slightly, from 94.2 percent to 93.7 percent.[89]

63. Reports filed with the Commission show that the Bell operating companies increased the amount spent on investments in new plant by about 4.5 percent during the first three years of price caps, compared to the 1988-1990 time frame.[90] As a percentage of depreciation, RBOC investment in new plant increased by approximately 4.2 percent under price caps as

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[83] Quality of Service for the Local Operating Companies Aggregated to the Holding Company Level, Jonathan M. Kraushaar, Industry Analysis Division, March 1994 (Service Quality Report).

[84] Fiber Deployment Update, End of Year 1993, Jonathan M. Kraushaar, Industry Analysis Division, May 1994 (Fiber Deployment Update).

[85] Telephone Subscribership in the United States (Data Through July 1994), Alexander Belinfante, Industry Analysis Division, November 1994 (Subscribership Report).

[86] Service Quality Report.

[87] Service Quality Report, Table 1. Small business customer satisfaction declined from 91.5 percent to 85.1 percent during this period. The Report noted that several carriers have revised their customer perception surveys, which might cause apparent fluctuations in data, but stated that the downward trend for NYNEX "probably has other causes." Service Quality Report at 4.

[88] Fiber Deployment Update.

[89] Subscribership Report.

[90] See Appendix C, Table 4, compiled from Statistics of Communications Common Carriers.

compared to 1988-1990; and, as a percentage of total employee compensation, investment in new plant increased by about 1.4 percent during those same time periods.[91] Although the implementation of price caps apparently did not inspire a major increase in network investment, RBOC infrastructure investment did grow under price caps. This indicates that implementation of price caps has not discouraged investment in new facilities or led to diminished investment in network modernization.

B. Policy Goals and Directions for LEC Price Caps

1. Introduction

64. This Commission has long sought to encourage full and fair competition in communications markets, in the conviction that competition can be expected to carry out the purposes of the Communications Act more assuredly than regulation. In light of this conviction, we adopted the current price cap system which, we believed, was not only superior to rate-of-return regulation, but could also act as a transitional system as LEC regulated services became subject to greater competition. As competition has taken effect in various markets, we have been able to shift to more lightly regulated regimes. In the case of AT&T, for example, price caps proved to be a transitional form of regulation for many services, which were moved from price caps into streamlined regulation as competition for these services increased.[92] While the LECs apparently retained significant market power under price caps, we similarly allowed them increased pricing flexibility as conditions for increased competition in local transport were met. We also anticipated that this fourth year review of LEC performance under price caps would provide a forum to consider other reforms, consistent with the idea of regulating only where and to the extent that competition remained absent in the marketplace.

65. In the Notice, we solicited comment on whether the policy goals and directions we have set for the LEC price cap plan should be changed. These goals include rates that are just, reasonable, and nondiscriminatory. They also include the goal of fostering a communications system that offers high quality services. Recognizing the dynamic nature of technological change in telecommunications, we also seek to encourage the deployment of new, innovative services. The current price cap plan seeks to achieve these goals by replicating many of the incentives of a

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[91] Id.

[92] Competition in the Interstate Interexchange Marketplace, CC Docket No. 90-132, 6 FCC Rcd 5880 (1991), modified on recon., 7 FCC Rcd 2677 (1992).

competitive market, and thus encouraging price cap LECs to make economic decisions similar to those they would make in a fully competitive market. Where market forces might not best serve the public interest and the goals of the Communications Act, however, other policies may be necessary. For example, we reaffirmed our commitment to the range of programs, such as the Universal Service Fund, Link Up America, and Lifeline Assistance, that promote affordable telephone service throughout the United States.[93]

66. We expressed our belief that these basic goals of price caps remain valid. We sought to examine whether the price cap plan furthers the development of the telecommunications infrastructure and services that will be needed in the years ahead. Based on such considerations, we framed General Issue 1 to seek comment on whether and how the goals of the LEC price cap plan should be revised to better serve the purposes of the Communications Act and the public interest in the years ahead.[94]

2. Comments

a. The Policy Direction of Replicating Competitive Markets

67. In their comments, parties with otherwise differing views and recommendations uniformly support the policy of fashioning price caps to reproduce, to the extent possible, the effects of competition.[95] An economic analysis submitted by USTA on behalf of the price cap LECs states, for instance:

> Our starting point is the view that (with few exceptions) the competitive process leads to good economic outcomes: just and reasonable prices, suitable levels of service quality, an appropriate return on investment, an efficient use of scarce resources, the proper rate of technical progress, and an adequate incentive to implement and market new products and services. Thus, regulation should foster a competitive outcome in those markets where competition has

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[93] Notice, 8 FCC Rcd at 1692.

[94] Id. at 1693.

[95] SNET, NYNEX, OCCO, GSA, AT&T, Ameritech, MFS, Pac Bell, Time Warner, and API state in general that the basic goals of price caps remain valid and should not be revised. SNET Comments at 7; NYNEX Comments at 3; OCCO Comments at 4; GSA Comments at 4; AT&T Comments at 4; Ameritech Comments at 3; MFS Comments at 5-6; Pac Bell Comments at 7; Time Warner Reply at 7-9, and API Reply at 3.

yet to develop.[96]

LECs urge that the Commission substitute competition for regulation where possible[97] and apply market-driven pricing where regulation is necessary.[98] The LECs also urge the Commission not to adopt policies that reduce the technical efficiency that competitive markets can be expected to generate.[99]

68. Long distance carriers addressing the issue also voice their support for competition and, in its absence, policies that replicate the results of competition. MCI cites the success of competition in the long distance and customer premises equipment markets in benefitting customers through innovation, high quality services, and reduced rates.[100] WilTel similarly reasons that "[c]ompetitive markets, with open access to all customers for all service providers, will provide the best path to economic growth and widespread access to a diversity of information sources and other services, including health and educational services."[101]

69. Comments representing the views of customers also strongly support the competitive market as a model and goal of regulatory policy. An economic study submitted by Ad Hoc asserts:

> The central goal of economic regulation is to achieve a "competitive result" in industries and markets in which some degree of "market failure" precludes this outcome from occurring on its own . . . . The bedrock "competitive

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[96] National Economic Research Associates, Inc., "Economic Performance of the LEC Price Cap Plan," USTA Comments, Attachment 5 at 1.

[97] Harris, "Benefits of LEC Price Cap Reform," USTA Comments, Attachment 2 at 16.

[98] Id. ("For competition policy to work well, pricing should be market-driven with only limited, targeted exceptions. Competition policies should recognize when, and the degree to which prices are not market-driven. In the best case, prices are regulated only when competition or customer discretion is inadequate to protect buyers from the exercise of market power.").

[99] See e.g., "Regulatory Reform for Local Exchange Carriers: Competition Through Regulatory Symmetry," Statement of Dr. Mark Schankerman, May 1994, GTE Comments, Attachment A at 3-4.

[100] MCI Comments at 7-8.

[101] WilTel Comments at 8.

result" objective of economic regulation is not -- and should not be -- modified or diminished under price cap or other forms of incentive regulation, *and proposals for revision of the basic FCC price cap system should in all cases be evaluated with respect to their consistency with the fundamental "competitive result" goal.*[102]

b. Changes Proposed in the Current Plan to Replicate Competitive Markets More Accurately

70. The commenters on the policy goal of replicating competition differ in their identification of specific features of the current price cap plan that do not, in their view, accurately reproduce the results of competitive markets. As we discuss in more detail in later sections of this First Report and Order, the LECs contend that the current plan falls short of the competitive ideal primarily because it includes features of rate of return-based regulation. USTA identifies four main flaws in the current price cap plan:

> First, the low-end adjustment leaves customers at risk, since they 'share' in any underearnings. Second, sharing [of high-end earnings] limits the incentives for efficiency, innovation, and good performance; in competitive industries, firms that perform above industry averages earn above the industry average profit; firms that perform below average earn less. Third, sharing plans are more costly and complex to administer, because they require both an apparatus for price indexing and for regulating the rate of return. Fourth, the regulator can no longer honor its half of the rate of return contract: given the degree to which competition will develop, the Commission cannot realistically commit itself to assuring LECs the opportunity to earn a given rate of return over the life of their current investments.[103]

71. USTA proposes that the Commission remedy these flaws by adopting pure price cap regulation. In addition, it recommends policy changes such as ending the prescription of depreciation rates, streamlining the regulations for new services, and establishing regulatory parity for LECs, CAPs, IXCs, and other service providers. USTA argues that these changes, taken together, will create substantially greater incentives for

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[102] Selwyn et al., "LEC Price Cap Regulation: Fixing the Problems and Fulfilling the Promise," submitted with Ad Hoc Comments, Attachment A at 7, 9 (emphasis in original).

[103] Harris, "Executive Summary of USTA's Expert Reports on LEC Price Cap Reform," USTA Comments, Attachment 1 at 5.

efficiency and innovation, similar to those in competitive markets. A LEC study estimates that the current LEC price cap plan provides less than 35 percent of the efficiency incentives that exist under unregulated competition, and that marginal efficiency incentives in the plan are only about 18 percent for a LEC whose earnings are in the sharing zone each year.[104] As we discussed above, USTA estimates that its pure price cap plan would, over time, stimulate economic growth, create additional jobs, lower inflation, and produce savings to consumers, in addition to other benefits.[105]

72. IXCs and other LEC customers contend, however, that to replicate competition more accurately the current plan should be revised to increase the benefits of the plan to customers. For example, AT&T agrees with the Commission's comments in the Notice that the LECs' average profitability has increased under price caps and the Notice's further observation that this may provide "a good case" for revising the productivity factor upward.[106]

73. MCI states that the price cap plan does not require fundamental revision, but that the Commission must revise key parameters of the plan, such as the X-Factor, with the goal of achieving a more equitable allocation of benefits between LEC ratepayers and LEC shareholders. It points to increases in LEC earnings, declines in their costs of capital, and exogenous cost increases as generating benefits to shareholders that eclipsed ratepayer benefits by $900 million. In MCI's view, the key parameters of the original price cap plan, especially the X-Factor, turned the plan into a "no lose" proposition for the LECs, not one that fairly shared the benefits of price cap regulation. MCI urges the Commission to modify the plan to constrain LEC prices to reflect costs more accurately, to maximize the economic welfare obtainable through price caps, and to avoid incorrect pricing that would send distorting signals to the many sectors of the economy where telecommunications is a key input.[107] The General Services Administration (GSA) believes that current price cap rates are not just and reasonable, and that lower rates would benefit the economy, create jobs, and promote universal service, while allowing infrastructure development, competition and open access to be implemented in an economically efficient manner to the ultimate benefit of all

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[104] Strategic Policy Research, "Regulatory Reform for the Information Age," NYNEX Comments, Attachment F at 47.

[105] Section III.A.2, supra.

[106] AT&T Comments at 21-22.

[107] MCI Comments at 2-5, 10-11.

consumers.[108]

74. ICA also asserts that the initial price cap plan was too generous to the LECs. ICA states that the Commission's first mandate is to protect ratepayers and to prevent LECs from unduly exercising market power, and urges that "the LECs' price cap be reset so as to ensure that LEC earnings are no higher than returns realized in the overall competitive capital market."[109] Not to do so, ICA maintains, "would perpetuate the large share of excess earnings that LECs have achieved by means of an overly-generous regulatory system, rather than becoming more efficient."[110] ICA also expresses concerns that rates above competitive levels could distort the organization of the U.S. telecommunications and information industries. "Excess prices for communications services will lead to the dominant LECs realizing ever-higher margins, and the resulting cash flow could be diverted to internally financed strategic investments that should be funded separately through public securities markets. If LEC cash flow is directed toward investments in competitive or foreign markets, replacing financing that should be raised in competitive capital markets, the result may simply be their unwarranted dominance over vital new sectors of America's high technology industries."[111]

75. Ad Hoc strongly recommends that the Commission adhere to the principle that the goal of price cap regulation is to achieve as closely as possible the "competitive result," i.e., the price and earnings levels and efficient resource allocations that would be expected to occur in fully competitive markets, in interstate access markets where the LECs retain substantial market power.[112] Its accompanying economic study, prepared by Economics and Technology, Inc. (ETI), asserts that the reality of the current price cap plan falls far short of providing the level of discipline imposed by competition. As the study explains, in competitive industries price levels are set by the marketplace, influenced by input prices, technology, and demand and supply conditions. While individual firms have incentives to reduce costs and improve efficiency in order to generate greater profits, these gains are transitory. In time, the sources of

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[108] GSA Comments at 4.

[109] ICA Comments at 4.

[110] Id. at 4.

[111] Id. at 6.

[112] Selwyn et al., "LEC Price Cap Regulation: Fixing the Problems and Fulfilling the Promise," Ad Hoc Comments, Attachment A at 2.

these efficiency gains, such as new production techniques and technologies, are mimicked by rivals, so that profit gains frequently will be short-lived. "There is no expectation in a competitive market that an efficiency gain on the part of an individual firm will create a *permanent* increase in profits."[113]

76. Thus, Ad Hoc argues, benefits of LEC efficiency gains must not be permanently institutionalized, but rather should be treated as temporary and flowed through to customers over time in the same way that a competitive marketplace recognizes the fluid nature of markets and industries.[114] The ETI study concludes that the price cap plan should be revised to: (1) accommodate periodic changes in industry productivity; (2) reflect accurately actual changes in LEC input costs; (3) simulate the diffusion of efficiency gains in competitive markets through the sharing requirement; (4) reflect fundamental changes in prevailing costs of money so that the same types of capital market conditions would exist as for firms in competitive industries; and (5) maintain effective safeguards to prevent "gaming" of the price cap sharing mechanism.[115]

77. While not disputing the Ad Hoc/ETI description of how competitive markets flow productivity gains through to customers[116] and Ad Hoc/ETI's conclusion that profit gains are transitory, the LECs raise several problems with their view:

> First, technological or process innovation requires a long period of time to diffuse throughout a company or network, so that even in competitive markets, the duration of gains or losses from productivity growth can be quite long. Second, while competitive advantage in rivalrous markets is transitory, there is no automatic link between higher productivity growth of one firm and higher productivity growth of the industry

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113 Id. at 10 (emphasis in original).

114 Id. at 3, 9-10.

115 Id. at 10.

116 But see SWB Reply at 34 (citing no authority and giving no explanation, SWB claims that "[i]n a competitive market, all firms are able to retain the benefits of increased efficiency."); see also SWB Comments on USTA January 18 Letter at 7-8 (SWB contends that in nonregulated competitive markets, firms are encouraged to "build a better mouse trap" by the increased returns that such an innovation provides; SWB asserts that over time, "other firms attempt to match the results of an innovator and eventually 'compete away' the lasting benefits to the innovating firm.")

average. If a firm can beat the industry average [total factor productivity] growth every year, it will experience above-normal earnings every year, and -- most important -- a rise in its measured regulatory accounting earnings will not trigger any force that will lower its earnings in the future. In competitive markets, there is no incentive to withhold productivity gains from the market for fear that they will engender a productivity penalty in the future.[117]

c. Infrastructure Development Goals

78. Some LECs recommend that the goals of price caps be expanded to include stimulation of infrastructure development. Among the expanded goals recommended by USTA, and supported by BellSouth, SWB, GTE, and RTC, is the goal of developing the National Information Infrastructure (NII).[118]

79. ICA asserts that it would be wrong to attenuate further the plan's ratepayer protection features in favor of a "supply-side" economic policy designed to encourage or to extend universal service to telecommunications capabilities that many consumers may not want.[119] Time Warner asserts that embedding special treatment for LEC investment would only sustain the LECs' dominance.[120]

80. Some of the commenters recommend that the Commission increase incentives for LEC investment in the NII by: (1) eliminating or revising the sharing and low-end adjustment mechanisms; (2) eliminating or revising the depreciation prescription; (3) revising the new services rules; (4) decreasing the base productivity factor; and (5) providing regulatory symmetry and pricing flexibility.[121] BellSouth asserts that,

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[117] USTA Reply, Attachment 4 at 33.

[118] USTA Comments at 3-4; BellSouth Comments at 13; SWB Comments at 67; GTE Comments at 38; RTC Comments at iii, 4.

[119] ICA Comments at 4.

[120] Time Warner Reply at 8. See also MCI Reply at 10.

[121] Ameritech Comments at 6-7; Pac Bell Comments at 9; CCIA Comments at 6-13; CCIA Reply at 3 (stating that deregulating LEC depreciation rates would stimulate more LEC investment in regulated local network plant and thus promote completion of the NII); id. at 11 (stating that "[t]he Commission can neither accurately predict nor establish the time of economic obsolescence under competitive conditions"); BellSouth Comments at 18; SNET Comments at 9 (stating that improved capital recovery

because the LEC price cap plan places constraints on the level of LEC earnings, the plan provides far less incentive for LECs to reinvest in price cap services relative to other, less regulated lines of business that offer the potential for greater returns.[122] Time Warner suggests that the LECs as well as their competitors should contribute to the development of a NII.[123] ARI recommends that the Commission require that a reasonable portion of any increased LEC earnings from price caps be invested in the network.[124]

81. CCIA, ALA, NADO, and the Council of Schools recommend that the Commission offer LECs more favorable treatment under price cap regulation (including relief from sharing obligations, depreciation requirements, and the baseline productivity factor) to encourage the LECs to connect public facilities such as schools and libraries to the NII.[125] The Educational Organizations suggest that the price cap LECs be given the option of allocating the 0.5 percent consumer productivity dividend (CPD) to a special account against which the LECs would charge investments made in educational and library infrastructure in their telephone service territories.[126] Bell Atlantic suggests that the Commission adopt an optional lower productivity offset that the LECs could elect in exchange for devoting additional revenues they receive as a result of choosing the option to targeted, Commission-approved purposes.[127]

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mechanisms, increased pricing flexibility, and streamlined filing and cost support procedures would promote investment in the infrastructure); Lincoln Reply at 2-3; NTI Reply at 6-15; US West Comments at 41; BroadBand Comments at 5; GTE Reply at 95-101; see also Sprint Comments at 5 (recommending elimination of the sharing mechanism); Eagle Comments at 1-3 (stating that elimination of the cap on LEC profitability will stimulate growth in telecommunications manufacturing and will speed the modernization of telephone network infrastructure); Senior Comments at 1.

[122] BellSouth Comments at 18.

[123] Time Warner Comments at 3.

[124] ARI Comments at 4-5.

[125] CCIA Comments at 3, 15; ALA Comments at 2; The Council of Schools Comments at 3; NADO Reply at 6-7.

[126] Educational Organizations Reply at 8; AASA Reply at 1; see also NADO Reply at 7.

[127] Bell Atlantic Reply at 18.

82. In a February 22, 1995 ex parte filing, USTA proposes that LECs make a voluntary contribution of an amount equal to one percent of the LEC's annual interstate revenues into an education fund every year for three years.[128] The education fund, which would be available to K-12 schools and libraries, would "phase out" at the end of three years.[129] The funds would be available for interconnection to the NII or to further develop their NII capabilities.[130] Under the proposal, the Commission would create and oversee the operation of a board to administer the fund on a "technology neutral and competitively neutral basis."[131] USTA maintains that its proposal avoids many of the controversies generated by the other education proposals submitted in this docket because "[f]unding would be made out of stockholder equity"[132] and thus "it would be completely outside of the FCC's price cap mechanisms."[133]

83. ICA asserts that, if the Commission revises the LEC price cap plan to accelerate NII development (which ICA opposes), then any additional infrastructure funding should be limited to developing modernized information resources in public institutions and should be subject to matching funds from non-ratepayer sources.[134] ICA maintains that any such funding mechanism should remain exogenous to the LEC price cap plan and should be subject to prior Commission approval. ICA suggests that the funding from the rates of regulated LECs should be limited to $20 million per year for each carrier or holding

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[128] Ex parte letter from Roy M. Neel, President and Chief Executive Officer of USTA to Reed E. Hundt, Chairman of the FCC, at 1-2, Attachment at 1 (dated Feb. 22, 1995) (USTA Feb. 22 Letter).

[129] USTA Feb. 22 Letter, Attachment at 1; see also USTA Feb. 22 Letter, Attachment at 1. (asserting that assuming all of the price cap LECs participate, the fund might initially be established at $200 million, and grow to a total of $600 million over the three-year period).

[130] USTA Feb. 22 Letter at 2.

[131] USTA Feb. 22 Letter, Attachment at 2; see also USTA Feb. 22 Letter at 2 (USTA's proposal would allow schools and libraries to make purchases from any firm subject to the Commission's jurisdiction and would not require the use of any particular technology or service provider).

[132] USTA Feb. 22 Letter, Attachment at 1.

[133] USTA Feb. 22 Letter at 2.

[134] ICA Comments at 7-8.

company. In addition, ICA recommends that only projects that have been subject to full competitive procurement rules should be eligible for ratepayer supplied infrastructure funds.[135]

84. Many commenters oppose modifications to the LEC price cap plan to accelerate development of the NII.[136] ICA says that regulatory awards of higher earnings, higher price cap ceilings, higher depreciation, and other sources of increased cash flow do not generally translate into greater LEC investment in the network.[137] CCTA avers that reducing the productivity factor to encourage LEC investment in the infrastructure would be tantamount to requiring ratepayers to provide the funding and to bear the risk of that investment. CCTA maintains that such an approach to increased infrastructure investment is contrary to the objectives of price cap regulation.[138] Ad Hoc, Time Warner, and TCG assert that modifications to the plan to stimulate investment in the infrastructure would ensure that the LECs continued to monopolize the local exchange and exchange access markets. They assert that marketplace forces should define the parameters of the NII and that the Commission can most effectively assist in the development of a ubiquitous NII by promoting competition in the local infrastructure.[139] MCI, API,

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[135] ICA Comments at 7-8.

[136] Ad Hoc Comments at 11; TCG Comments at 6; OCCO Comments at 6; WilTel Reply at 16; Time Warner Reply at 7-8; PaOCA Comments at 8; API Reply at 7; Hyperion Reply at 9; Cox Reply at 9; ICA Reply at 15; MCI Comments at 11-13.

[137] ICA Reply at 18; see also WilTel Reply at 15 (asserting that there is no connection between pricing flexibility and infrastructure investment); ICA Comments, Attachment A at 2 (stating that on average, for the last seven years, the RBOCs have internally generated $90 million per month that was not re-invested in their networks and, therefore, capital formation is not a problem in the LEC industry); Cox Reply at 9 (stating that most large LECs already have announced plans to spend billions of dollars upgrading their facilities to provide video dialtone and other new services).

[138] CCTA Reply at 25; see also PaOCA Comments at 8-9 (maintaining that LECs should bear the risks involved in deploying new endeavors).

[139] Ad Hoc Comments at 11-12; ICA Reply at 15; TCG Comments at 6-7; WilTel Reply at 15; Cox Reply at 9; Ameritech Reply at 4; ICA Comments at 7 (stating that increased competition would provide a more efficient mechanism for transferring new technologies into the economy than would an explicit infrastructure element in the price cap plan).

and Wiltel recommend that the Commission encourage broader-based network investment by adopting policies that require the unbundling of access services, encourage cost-based pricing, and ensure nondiscriminatory access to the LEC networks.[140]

d. Other Goals

85. USTA, BellSouth, SWB, GTE, and RTC recommend that price cap goals be expanded to include: (1) promotion of universal service; (2) stimulation of new service development; (3) stimulation of economic growth by reducing production costs and inducing customers to make greater use of telecommunications services; (4) promotion of balanced competition in access markets; (5) promotion of the efficient use of the network by ensuring that decisions made by all carriers and their customers approximate decisions made under competitive market conditions; and (6) prohibition of unreasonable discrimination.[141]

86. USTA's comments on behalf of the LECs also assert that changes in industry conditions have two crucial implications for policy goals. First, to reflect the growing importance of telecommunications to national economic welfare, USTA urges that added weight be given to economic efficiency, competition, and economic development effects. Second, it claims that policy makers should take full account of the dynamics of change in telecommunications, on both supply and demand sides. It proposes a set of principles to guide price cap reforms accordingly: substitute competition for regulation, promote competitive neutrality, facilitate market responsiveness, synchronize regulatory and competition policies, make price caps more adaptive and flexible, and shift the risks of network investments from ratepayers to shareholders.[142]

87. US West opposes expansion of the price cap goals to advance any particular social agenda, including increasing employment or improving education. US West argues that attainment of such social goals will be the result of a more efficient price cap plan.[143] MCI opposes expanding the goals to include promoting universal service or encouraging the development of the NII because these issues affect the entire

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[140] MCI Comments at 13; API Reply at 8; WilTel Comments at 16.

[141] USTA Comments at 3-4; BellSouth Comments at 13; SWB Comments at 67; GTE Comments at 38; RTC Comments at iii, 4.

[142] USTA Comments, Attachment A at 4-5, and Attachment 2 at 13-18.

[143] US West Comments at 4, 22.

industry while price caps applies only to the LECs. MCI says that some of the other goals proposed by USTA and BellSouth (including stimulating economic growth) already are subsumed in the existing goals. MCI adds that the proposed goals for economic growth and job creation are not listed as responsibilities of the Commission in the Communications Act, which does require the Commission to ensure just, reasonable, and nondiscriminatory rates in Sections 201 and 202.[144]

88. MFS recommends that the Commission put greater emphasis on the goal of ensuring nondiscriminatory rates.[145] TCG recommends that the goals be expanded to include promotion of local telecommunications competition.[146]

89. MCI believes that the goals should be augmented to include promoting the development of competition in the interstate access market.[147] WilTel recommends expanding the goals to include both "the promotion of diverse competition in all telecommunications markets and the guarantee of open, nondiscriminatory access paths between all end user customers and all competing suppliers of services."[148]

3. Analysis

a. Purposes of the Communications Act

90. The goals of the LEC price cap plan ultimately spring from the Communications Act, including the broad purpose "to make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communications service with adequate facilities at reasonable charges,"[149] as well as from the specific provisions of Title II of the Act directing that rates and regulations be just and reasonable,[150] and not unreasonably discriminatory.[151]

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[144] MCI Reply at 10.

[145] MFS Comments at 4-6.

[146] TCG Comments at 4.

[147] MCI Comments at 7-8. MCI notes that, at the time of the original adoption of the price cap plan, the FCC had not formally authorized competition for interstate access services. Id. at 8.

[148] WilTel Comments at 7.

[149] Section 1 of the Communications Act, 47 U.S.C. §151.

[150] Section 201(b) of the Communications Act, 47 U.S.C. §201(b).

91. Both economic theory and our own experience support the views of many commenters in this docket that these purposes generally are best accomplished by actual competition or, where this does not exist or is not fully effective, by policies that replicate the effects of competition to the extent possible. Effective competition encourages firms to improve their productivity and introduce improved products and services, in order to increase their profits. With prices set by marketplace forces, the more efficient firms will earn above-average profits, while less efficient firms will earn lower profits, or cease operating. Over time, the benefits of competition flow to customers and to society, in the form of prices that reflect costs, maximize social welfare, and efficiently allocate resources.

b. Policy Goals for LEC Price Caps

92. In the case of the LECs' interstate services, the optimal form of regulation would largely replicate the competitive outcome. Because the LECs appear to retain substantial market power in providing local exchange and access services, regulation continues to be needed to achieve the goals of the Communications Act, and to increase consumer welfare. The current LEC price cap plan represents, in large part, a program of improving consumer welfare by introducing profit incentives and price constraints that more closely replicate the operation of competition than traditional, rate-of-return regulation. Our goal and expectation were that, by easing restrictions on profits while setting price ceilings at a challenging but reasonable level, the LECs would have the incentive to become more efficient and innovative at the same time that customers benefitted from lower rates.

93. In considering possible revisions to the LEC price cap plan, our primary goal will be to maximize the benefits of the plan to consumers and society, in accordance with the purposes and requirements of the Communications Act. This goal generally will best be accomplished by replicating the effects of competition. Therefore, in the absence of clear and substantial evidence that some other regulatory approach will better accomplish the purposes of the Act, we expect to pursue the goal of amending the features of the LEC price cap plan so that it replicates the competitive outcome as closely as practicable.

94. Implementing this goal usually will require an analysis of specific features of the current plan, their effect on the competitive outcome, the effect of possible revisions, and the conformance of revisions that appear to achieve a competitive

[151] Section 202(a) of the Communications Act, 47 U.S.C. §202(a).

outcome with the purposes and provisions of the Communications Act. For example, any revisions we adopt may require analysis of their effect on another primary goal, universal service, as set out in Section 1 of the Act and as implemented in various current Commission programs. It may also require evaluation of the revision's effect on other Commission policies and the public interest. As a general corollary to the goal of seeking to both replicate and stimulate competitive outcomes, we will also prefer policies and programs that minimize distortion of competitive marketplace forces in telecommunications.

95. Based on this approach and the current record, we think it unnecessary, for purposes of the interim plan we adopt today, to set other price cap goals, as requested by some commenters. Revisions to the current plan that, for an interim period pending the adoption of our permanent plan, more nearly replicate the effect of competition are also likely to improve its performance in achieving other goals in an efficient manner. Infrastructure development is a case in point. To the extent the price cap plan creates incentives similar to those of competition, LECs should be encouraged to deploy the infrastructure needed to meet customer needs and to introduce new technological improvements and services, in the most cost-effective manner, because generating more demand and lowering costs will increase the LEC's profits. The fundamental objective of LEC price cap regulation is to ensure that rates for interstate telecommunications services are just, reasonable and nondiscriminatory pursuant to Title II of the Communications Act.[152] We therefore find that it is inappropriate to consider proposals for specific infrastructure goals and programs, including proposals to encourage LECs to provide inside wire facilities to schools and libraries, in the context of this LEC price cap performance review docket. In so finding, however, we emphasize that we will consider the need to adopt goals or programs that foster infrastructure development in other contexts unrelated to price caps. Consistent with this, we think it appropriate to consider proposals for extending the public switched telecommunications network to libraries and classrooms in an examination of universal service issues.

96. We also do not find that an adequate case has been made in the current comments for other new price cap goals. A goal such as open, nondiscriminatory access is largely subsumed within the broader goal of seeking to replicate competition, because it represents one policy mechanism to foster competition. It is, in fact, a mechanism the Commission often has applied, notably for

[152] Sections 201(b) and 202(a) of the Communications Act, 47 U.S.C. §201(b) and §202(a).

the LECs in the Part 69 access rules.[153] The question of whether to apply that mechanism in any individual case is likely to hinge on whether the mechanism best accomplishes the purposes of the Communications Act, is otherwise lawful, and warrants revising the Part 69 rules. That question is most likely to find an answer in proceedings specifically directed to considering those rules.

IV. MAJOR BASELINE ISSUES

A. Overview

97. In this Part we address three interrelated matters: the productivity adjustment, or X-Factor; the sharing and low-end adjustment mechanisms; and reinitialization of price-capped rates through a one-time rate reduction.

98. The record in this proceeding developed in two stages. In response to the Notice, interested parties filed comments by May 9, 1994, and replies by June 29, 1994. After the completion of that initial pleading cycle, a number of parties submitted ex parte statements to supplement or revise the arguments or proposals they made earlier. Many of these ex parte filings concerned the major baseline issues that are discussed in this section. Then, on January 18, 1995, USTA submitted an ex parte statement substantially revising the proposals regarding primarily baseline issues that it made in its May 9, 1994 comments.[154] USTA's submission was made at a comparatively late point in this proceeding. To ensure that all interested parties were aware of USTA's new proposals, the Common Carrier Bureau (Bureau) issued a public notice requesting comment on USTA's January 18 Letter.[155] Fifteen parties submitted comments,[156] and

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[153] Part 69 of the Commission's Rules, 47 C.F.R. §69.1 et seq.

[154] January 18 Letter.

[155] Public Notice, Common Carrier Bureau Invites Public Comment on USTA Ex Parte Submission, DA 95-102 (released. Jan. 24, 1995).

[156] Specifically, AT&T, Ameritech, BellSouth, US West, NYNEX, MCI, GSA, SWB, API, Pac Bell, and Time Warner submitted their comments on January 31, 1995. Ad Hoc submitted its comments on February 2, 1995, Comptel and LDDS Communications, Inc. (LDDS) submitted their comments on February 8, 1995, and Bell Atlantic submitted its comments on February 15, 1995. We refer to all these comments as "January 18 Comments." Some

three submitted replies.[157] Several new or revised proposals were submitted even later than USTA's filing and thus have received even less of an opportunity for comment by interested parties than USTA's January 18 Letter.[158] The discussions that follow will address both initial and ex parte filings in this proceeding as they relate to each issue and to each party's views of the issue addressed.

B. The X-Factor

1. Background and Current Provisions

99. The price cap index, or PCI, is adjusted each year based on a measure of inflation that embodies economy-wide productivity gains and price changes (the Gross National Product

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parties argue that USTA's proposal is procedurally defective because it was filed so late in this proceeding that parties were denied an adequate opportunity to comment on it. Ad Hoc January 18 Comments at 4-5; API January 18 Comments at 1-2; Time Warner January 18 Comments at 4-5. Bell Atlantic replies that USTA's January 18 Letter is a reasonable response to concerns raised by other parties in this proceeding, and could not have been submitted until the initial stage of the record was "fully explored." Bell Atlantic January 18 Comments at 3. We conclude that the Bureau's public notice gave interested parties an adequate opportunity to comment on USTA's revised proposal, and so we will include USTA's January 18 Letter in the record.

[157] USTA submitted a reply to AT&T's comments on February 9, 1995. CFA and ICA filed a joint reply on March 3, 1995, and AT&T responded to USTA's reply on March 10, 1995. We refer to these filings as "USTA January 18 Reply," "CFA-ICA January 18 Reply," and "AT&T January 18 Reply," respectively. In addition, on March 16, 1995, USTA filed another ex parte statement purporting to quantify the effects of the errors it alleged in its response to AT&T's comments.

[158] See Letter from Kenneth Rust, Director, Federal Regulatory Matters, NYNEX, to Acting Secretary, March 3, 1995 (NYNEX Mar. 3 Proposal). Sprint explained parts of its proposal in a number of ex parte statements. See, e.g., Letter from Warren D. Hannah, Director, Federal Regulatory Relations, Sprint, to Acting Secretary, December 29, 1994 (Sprint Dec. 29, 1994 Ex Parte Proposal); Letter from Warren D. Hannah, Director, Federal Regulatory Relations, Sprint, to Acting Secretary, February 2, 1995 (Sprint Feb. 2, 1995 Ex Parte Proposal); Letter from Jay C. Keithly, Vice President, Sprint, to Acting Secretary, February 15, 1995 (Sprint Feb. 15, 1995 Ex Parte Proposal). GTE submitted an ex parte statement in partial support of NYNEX's proposal on March 13, 1995.

Price Index (GNP-PI)), minus an X-Factor. The X-Factor is an offset that reflects the fact that telephone carriers, historically, have experienced cost changes, due to differences in productivity and input prices relative to the economy as a whole, resulting in telephone rate trends being below the level of inflation. In the LEC Price Cap Order, we determined that the GNP-PI does not fully reflect that the LECs' higher than average growth in productivity had resulted in lower than average telephone prices, relative to inflation. We therefore concluded that an offset must be included in the price cap formula to ensure that rates continued to decline in relation to the GNP-PI.[159] Price cap regulation is also intended to generate incentives and opportunities for LECs to achieve still higher productivity growth. In the LEC Price Cap Order, we mandated a price cap index that includes at least a 3.3 percent productivity offset each year, based on two Commission staff studies which, when averaged, indicated a historical productivity growth of 2.8 percent, and a consumer productivity dividend (CPD) of 0.5 percent.[160] Alternatively, price cap LECs may elect a 4.3 percent X-Factor.[161]

100. In the Notice, the Commission noted that the price cap LECs had experienced higher earnings on average under price caps than in earlier periods. Their rates of return had increased from 11.25 percent at the start of price caps,[162] to an average

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159 LEC Price Cap Order, 5 FCC Rcd at 6796.

160 LEC Price Cap Order, 5 FCC Rcd at 6796. A short-term study examined productivity trends in interstate access from 1984 to 1990, and a long-term study covered interstate charges generally for the years 1930 to 1989. The 0.5 percent CPD was then added to assign the first price cap productivity gains to customers in the form of lower rates.

161 LEC Price Cap Order, 5 FCC Rcd at 6799. By selecting the more challenging 4.3 percent offset, the LEC lowers its rates an additional 1 percent, but may retain a greater portion of its profits if its efficiency gains exceed the offset. Id. at 6796; LEC Price Cap Reconsideration Order, 6 FCC Rcd at 2641-42. A LEC selecting the higher productivity factor must use a 4 percent productivity factor for its interexchange basket. LEC Price Cap Reconsideration Order, 6 FCC Rcd at 2642.

162 The price cap indexes were initiated at a rate of return of 11.25 percent. See LEC Price Cap Order, 5 FCC Rcd at 6814; LEC Price Cap Reconsideration Order, 6 FCC Rcd at 2643.

of 12.25 percent in 1992.[163] The Commission also noted that the LECs had enjoyed sharply declining interest rates during this period.[164] In view of these developments, we requested comment on whether the X-Factor used to compute the LEC price cap indexes should be changed and whether a one-time change in the LEC's price cap index should be required. We also asked what method should be used to determine a revised and reasonable X-Factor if the Commission decides to change the X-Factor. In addition, we asked whether the price cap LECs' profit levels are reasonable under the current LEC price cap plan in light of the price cap goal that higher profits are intended to be the reward for attaining increased efficiencies.

2. Comments and Studies

101. In the initial round of comments and replies filed in response to the Notice, USTA presented a plan for revisions to LEC price caps that was supported by most price cap LECs. A central feature of the USTA plan was its proposal to set a single X-Factor for all price cap LECs based on a study of LEC TFP performance relative to other firms in the economy from 1985 through 1992, and to leave the resulting 2.3 percent X-Factor unchanged for eight to ten years.

102. Comments and replies by IXCs such as AT&T and MCI and by telephone customers such as Ad Hoc, GSA, and others proposed their own changes to the current plan and generally opposed USTA's proposal for setting the X-Factor. These commenters claimed USTA's methodology was flawed and would result in an X-Factor that was far too low and that would give the LECs a windfall in future years. They proposed minimum X-Factors ranging from 5.0 percent (GSA) to 5.9 percent (MCI), based on several differing approaches and studies.[165]

103. Subsequently, on January 18, 1995, USTA filed ex parte a revised proposal for the LEC price cap plan. Under this proposal, LECs would have the option of electing an X-Factor based on a moving average of LEC productivity performance that would automatically adjust the X-Factor each year, based on the TFP methodology proposed in USTA's initial comments. In this

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[163] For the BOCs, 1992 rates of return ranged from a low of 11.41 percent for Bell Atlantic to a high of 13.32 percent for NYNEX, while GTE earned 11.26 percent, Rochester 12 percent, and United 12.81 percent.

[164] Notice, 9 FCC Rcd at 1696.

[165] GSA at first recommended a minimum X-Factor of 4.1 percent. GSA Comments at 8-10. GSA later increased its recommendation to 5.0 percent. GSA Reply at 14.

section we describe USTA's TFP Model, both as initially proposed and as revised in its ex parte filing; AT&T's Direct Model of Productivity; MCI's proposal to correct the Frentrup-Uretsky Study; and other proposals.

a. USTA Total Factor Productivity (TFP) Model

i. USTA's Initial Proposal

104. In their initial comments, USTA and some of the LECs recommend reducing the productivity offset to 2.3 percent and eliminating the CPD. As discussed below, USTA also proposes revising the Common Line formula in a way that would lower the productivity hurdle of the X-Factor significantly.[166] A number of LECs maintain that TFP measures productivity better than an earnings-based measure, and because it is not influenced greatly by business cycle fluctuations.[167]

105. USTA bases its argument on two studies it commissioned, one performed by Christensen, Schoech, and Meitzen[168] and the other by NERA.[169] The Christensen Study measures the TFP of price cap LECs over the period 1984-92, based primarily on Form M data submitted by LECs to the Commission. It then compares this result to figures for multifactor productivity for private firms in the U.S. economy for the same period.

106. The Christensen Study computes TFP as the ratio of an index of total LEC outputs to an index of total LEC inputs. The rate of growth of TFP is the rate of growth of the output index minus the rate of growth of the input index. The outputs used in the study are local service, interstate end user access, interstate switched access, interstate special access, intrastate access, long distance service, and miscellaneous services. The revenue data for each category of output are divided by a price

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166 USTA Comments at 80; BellSouth Comments at 46; GTE Comments at 73; SWB Comments at 36-39; Bell Atlantic Reply at 16; NYNEX Comments at 35-41.

167 USTA Comments at 80; BellSouth Reply at 23; GTE Reply at 23; Pac Bell Reply at 17; US West Comments at 41-42; RTC Reply at 3, 8.

168 Laurits R. Christensen, Philip E. Schoech and Mark E. Meitzen, "Productivity of the Local Operating Telephone Companies Subject to Price Cap Regulation," USTA Comments, Attachment 6 (Christensen Study).

169 National Economic Research Associates, Inc., "Economic Performance of the LEC Price Cap Plan," USTA Comments, Attachment 5 (NERA Study).

index (reflecting the overall changes in rates for that category) to calculate quantity indexes for each category. Growth rates of quantity indexes and average revenue shares are calculated for each service category. A category's weighted growth rate is constructed as the product of the rate of growth of the quantity index and the category's average share of total revenue. The rate of growth of the (aggregate) output index is the sum of the weighted growth rates of the categories.

107. The input index is an aggregation of capital, labor, and materials indexes. The capital index results from aggregating six asset classes using each asset type's average shares of capital costs as weights.[170] The labor index is the result of aggregating management and nonmanagement labor.[171] The cost of materials is used to construct a materials index.[172] An (aggregate) input index is constructed from growth rates of capital, labor, and materials indexes. The weighted capital index growth rate is the average share of capital out of total costs multiplied by the rate of growth of the capital index. The weighted labor index growth rate is the product of the average share of labor out of total cost and the rate of growth of the labor index. The weighted materials index growth rate is the product of material's average share of total cost and the rate of

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170 The capital index results from aggregating six types of assets. For each type of asset capital input quantities and capital input shares (that is for a given period, the asset type's share of total capital cost) are calculated. The weighted growth rate of an asset type is constructed as the product of the asset type's capital input quantity growth rate and the asset type's average capital input share. The rate of growth of the (aggregate) capital index is the sum of the weighted growth rates of all asset types.

171 Labor consists of two categories: management and nonmanagement. Growth rates of hours worked and average shares of total labor costs are calculated for each category of labor. A labor category's weighted growth rate is constructed as the product of the growth rate of hours worked and the labor category's average share of total labor cost. The growth rate of the labor index is the sum of the weighted growth rates for both categories of labor.

172 The cost of materials is used to construct the materials index. The cost of materials is the result of subtracting both depreciation and payments to labor from operating expense. Adjustments to the cost of materials are made for nonregulated activities and USOA accounting changes. The quantity index of materials is the result of dividing adjusted materials cost by GDP-PI. The growth rate of the materials quantity index is the growth rate of the materials index.

growth of the materials index. The rate of growth of the (aggregate) input index is the sum of the weighted capital index growth rate, the weighted labor index growth rate, and the weighted materials index growth rate.

108. For the 1984-1992 period, the Christensen Study concludes that total output, computed as described above, grew at an annual average rate of 3.5 percent, while inputs grew at 0.9 percent. Thus, the Christensen Study states that the LECs' TFP was an average of 2.6 percent per year. Because economy-wide TFP growth as reported by the Bureau of Labor Statistics averaged 0.3 percent over that same period, the Christensen Study concludes that the LECs' TFP is 2.3 percent greater than that reflected in the GNP-PI.[173] This differential of 2.3 percent, USTA maintains, represents the appropriate productivity factor to be used in the LECs' price cap index. USTA argues that there is no need to add an explicit consumer productivity dividend because the 2.3 percent factor will overstate actual long-term LEC productivity as competition continues to expand in LEC access markets, and because firms in competitive markets do not usually share the benefits of above-average productivity performance with their customers.[174]

109. The second USTA Study, prepared by National Economic

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[173] In fact, the 2.3 percent X-Factor was proposed after the initial round of comments. In its initial comments and reply, USTA proposed that the X-Factor be set at 1.7 percent, based on the Christensen Study's calculation that over the study period 1984-92 the average annual rate of growth in price cap LEC TFP was 2.6 percent, and that TFP growth for the U.S. private business sector from 1984-90, as measured by Bureau of Labor Statistics (BLS), was 0.9 percent. USTA recommended that the X-Factor be computed from the differential between these two figures, or 1.7 percent (2.6 percent - 0.9 percent = 1.7 percent). USTA Comments at 81-82. Subsequently, the BLS reported corrected figures that reduced the TFP growth figure for U.S. business sector firms to 0.3 percent. Thus, the revised differential became 2.3 percent (2.6 percent - 0.3 percent = 2.3 percent).

[174] USTA Comments at 84; <u>accord</u> NYNEX Comments at 40; Bell Atlantic Comments at 36. On January 20, 1995, USTA further revised its study results by adding 1993 data and correcting errors in data for prior periods. These revisions increased annual input growth from 0.9 percent to 1.0 percent, and lowered output growth from 3.5 percent to 3.4 percent. Accordingly, USTA revised its TFP offset from 2.6 percent to 2.4 percent (3.4 - 1.0), or 2.1 after adjusting for the corrected BLS data as discussed above. Letter from Mary McDermott, USTA, to William F. Caton, Acting Secretary, January 20, 1995.